

In the Claims

1. **(original):** A method of curing a composition comprising

- (a) at least one free-radical-polymerisable compound or
 - (b) at least one compound that, under the action of an acid, is able to enter into a polymerisation, polycondensation or polyaddition reaction, or
 - (c) at least one compound that, under the action of a base, is able to enter into a polymerisation, polycondensation or polyaddition reaction, or
- a mixture of components (a) and (b), or
a mixture of components (a) and (c); and
- (d) at least one photolabile compound that is activatable by plasma discharge;

wherein

the composition is applied to a three-dimensional substrate and
the curing is carried out in a plasma discharge chamber.

2. **(original):** A method of curing a composition comprising

- (a) at least one free-radical-polymerisable compound or
- at least one compound that, under the action of an acid, is able to enter into a polymerisation, polycondensation or polyaddition reaction, or
- (c) at least one compound that, under the action of a base, is able to enter into a polymerisation, polycondensation or polyaddition reaction, or
- a mixture of components (a) and (b), or
a mixture of components (a) and (c);
- (d) at least one photolabile compound that is activatable by plasma discharge; and
 - (e) at least one light stabiliser compound or UV absorber compound;

wherein

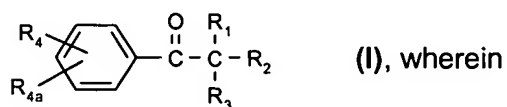
the curing is carried out in a plasma discharge chamber.

3. **(currently amended):** A method according to ~~either claim 1 or claim 2~~, wherein component (d) in the composition is selected from the group consisting of a free-radical photoinitiator, a photolabile acid and ~~or~~ a photolabile base.

4. **(currently amended):** A method according to ~~either claim 1 or claim 2~~, wherein component (d) in the composition is at least one compound selected from the group consisting of benzophenones,

benzophenone derivatives, acetophenone, acetophenone derivatives, halomethylbenzophenones, halomethylarylsulfones, dialkoxyacetophenones, anthracene, anthracene derivatives, thioxanthone, thioxanthone derivatives, 3-ketocoumarin, 3-ketocoumarin derivatives, anthraquinone, anthraquinone derivatives, α -hydroxy- or α -amino-acetophenone derivatives, α -sulfonylacetophenone derivatives, 4-aryol-1,3-dioxolanes, benzoin alkyl ethers and benzilketals, phenyl glyoxalates and derivatives thereof, dimeric phenyl glyoxalates, peresters, monoacylphosphine oxides, bisacylphosphine oxides, trisacylphosphine oxides, halomethyltriazines, titanocenes, borate compounds, O-acyloxime compounds, camphorquinone derivatives, iodonium salts, sulfonium salts, iron aryl complexes, oximesulfonic acid esters and photolabile amines.

5. **(currently amended):** A method according to either claim 1 or claim 2, wherein component (d) in the composition is at least one compound selected from the group consisting of formula I, II, III or IV and IV



R_1 is $\text{C}_1\text{-C}_{12}$ alkyl or $\text{C}_1\text{-C}_{12}$ alkoxy;

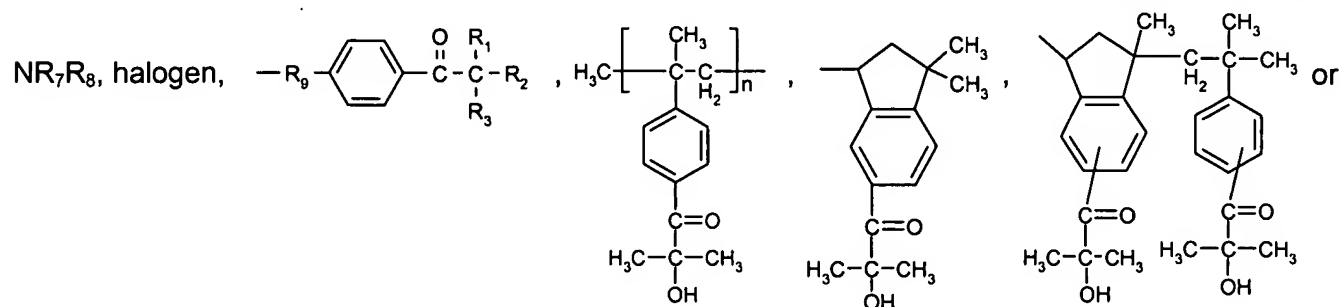
R_2 is phenyl, OR_5 or NR_7R_8 ;

R_3 has one of the definitions given for R_1 or is $\text{C}_3\text{-C}_{12}$ alkenyl, phenyl- $\text{C}_1\text{-C}_6$ alkyl or $\text{C}_1\text{-C}_6$ alkyl-phenyl- $\text{C}_1\text{-C}_6$ alkyl;

or R_1 and R_3 , together with the carbon atom to which they are bonded, form a cyclohexyl ring;

R_2 being phenyl when R_1 and R_3 are both alkoxy;

R_4 and R_{4a} are each independently of the other hydrogen, $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_1\text{-C}_{12}$ hydroxyalkyl, OR_5 , SR_6 ,



a monovalent linear or branched siloxane radical;

n is a number from 1 to 10;

R_5 and R_6 are each independently of the other hydrogen, $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_1\text{-C}_{12}$ alkenyl, phenyl, benzyl, $\text{Si}(\text{CH}_3)_3$ or $-\text{[C}_a\text{H}_{2a}\text{X}]_b-\text{R}_{10}$;

R₇ and **R₈** are each independently of the other hydrogen, C₁-C₁₂alkyl or C₂-C₅hydroxyalkyl, or **R₇** and **R₈**, together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O atoms or a NR₁₁ group;

R₉ is a single bond, O, S, NR₁₁, -CH₂CH₂- or $\begin{array}{c} \text{R}_{12} \\ | \\ -\text{C}- \\ | \\ \text{R}_{13} \end{array}$;

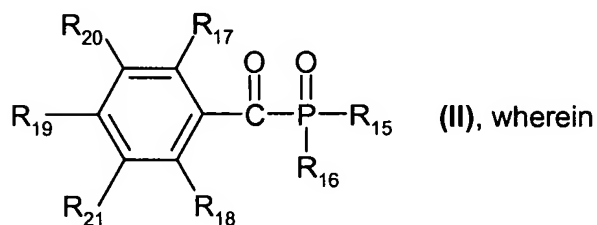
a and **b** are each independently of the other a number from 1 to 12;

X is S, O or NR₁₁;

R₁₀ is hydrogen, C₁-C₁₂alkyl or $\begin{array}{c} \text{O} \quad \text{R}_{12} \quad \text{R}_{13} \\ || \quad | \quad | \\ -\text{C}-\text{C}=\text{C}-\text{R}_{14} \end{array}$;

R₁₁ is hydrogen, phenyl, phenyl-C₁-C₄alkyl, C₁-C₁₂alkyl or C₂-C₅hydroxyalkyl; and

R₁₂, **R₁₃** and **R₁₄** are each independently of the others hydrogen or methyl;



R₁₅ and **R₁₆** are each independently of the other C₁-C₁₂alkyl, C₁-C₁₂alkoxy; phenyl which is unsubstituted or substituted by one or more OR₂₂, SR₂₃, NR₂₄R₂₅, C₁-C₁₂alkyl or halogen substituents;

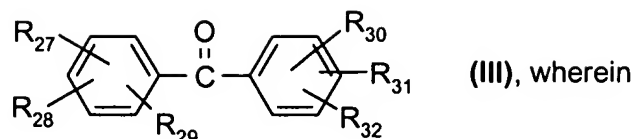
or **R₁₅** and **R₁₆** are biphenyl, naphthyl, phenyl-C₁-C₄alkyl or

R₁₇ and **R₁₈** are each independently of the other C₁-C₁₂alkyl, C₁-C₁₂alkoxy, CF₃ or halogen;

R₁₉, **R₂₀** and **R₂₁** are each independently of the others hydrogen, C₁-C₁₂alkyl, C₁-C₁₂alkoxy, CF₃ or halogen;

R₂₂, **R₂₃**, **R₂₄** and **R₂₅** are each independently of the others hydrogen, C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₃-C₈cycloalkyl, phenyl, benzyl, or C₂-C₂₀alkyl which is interrupted by O atoms and is unsubstituted or substituted by OH or/and SH; or **R₂₄** and **R₂₅**, together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O or S atoms or an NR₂₆ group; and

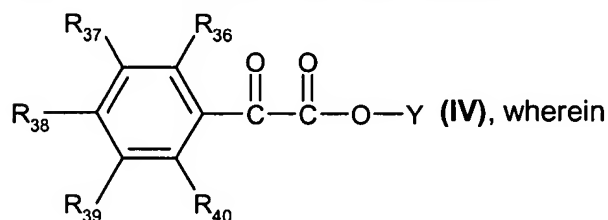
R₂₆ is hydrogen, phenyl, phenyl-C₁-C₄alkyl, C₁-C₁₂alkoxy, C₁-C₁₂alkyl or C₁-C₁₂hydroxyalkyl;



R₂₇, R₂₈, R₂₉, R₃₀, R₃₁ and R₃₂ are each independently of the others hydrogen, C₁-C₄alkyl, phenyl, naphthyl, -OR₃₅, -SR₃₅, -(CO)O(C₁-C₄alkyl), halogen, NR₃₃R₃₄ or a monovalent linear or branched siloxane radical, or R₂₉ and R₃₀, each in the o-position to the carbonyl group, together form a S atom; and

R₃₃ and R₃₄ are each independently of the other hydrogen, C₁-C₄alkyl, C₂-C₆hydroxyalkyl, or R₃₃ and R₃₄, together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O atoms or a NR₁₁ group; and

R₃₅ is C₁-C₁₂alkyl, C₂-C₆hydroxyalkyl or phenyl;



R₃₆, R₃₇, R₃₈, R₃₉ and R₄₀ are each independently of the others hydrogen, C₁-C₁₂alkyl unsubstituted or substituted by OH, C₁-C₄alkoxy, phenyl, naphthyl, halogen, CN and/or by -OCOR₄₁, or C₂-C₁₂alkyl which is interrupted by one or more O atoms, or R₃₆, R₃₇, R₃₈, R₃₉ and R₄₀ are OR₄₂, SR₄₃, NR₄₄R₄₅, halogen, a monovalent linear or branched siloxane radical, or phenyl unsubstituted or substituted by one or two C₁-C₄alkyl or/and one or two C₁-C₄alkoxy substituents, it being possible for the substituents OR₄₂, SR₄₃, NR₄₄R₄₅ to form 5- or 6-membered rings by way of the radicals R₄₂, R₄₃, R₄₄ and/or R₄₅ with further substituents on the phenyl ring or with one of the carbon atoms of the phenyl ring;

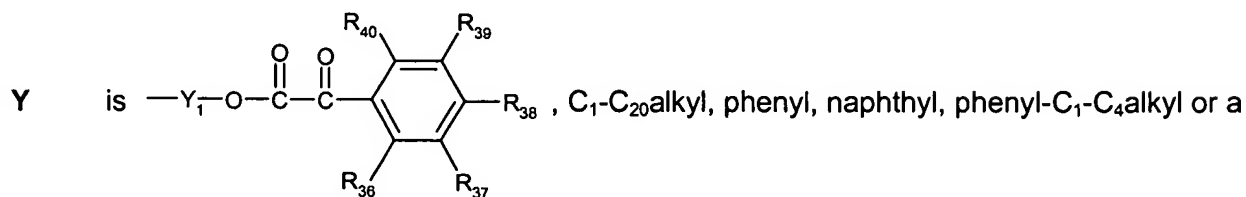
R₄₁ is C₁-C₈alkyl, or phenyl unsubstituted or substituted by from one to three C₁-C₄alkyl and/or one to three C₁-C₄alkoxy substituents;

R₄₂ and R₄₃ are each independently of the other hydrogen, C₁-C₁₂alkyl unsubstituted or substituted by OH, C₁-C₄alkoxy, phenyl, phenoxy or/and by -OCOR₄₁, or C₂-C₁₂alkyl which is interrupted by one or more O atoms, or R₄₂ and R₄₃ are phenyl unsubstituted or substituted by C₁-C₄alkoxy, phenyl or/and by C₁-C₄alkyl, or R₄₂ and R₄₃ are C₃-C₆alkenyl, cyclopentyl, cyclohexyl or naphthyl;

R₄₄ and R₄₅ are each independently of the other hydrogen, C₁-C₁₂alkyl unsubstituted or substituted by OH, C₁-C₄alkoxy or/and by phenyl, or C₂-C₁₂alkyl which is interrupted by one or more O atoms, or R₄₄ and R₄₅ are phenyl, -COR₄₁ or SO₂R₄₆, or R₄₄ and R₄₅, together with the nitrogen atom to which they are bonded, form a 5-, 6- or 7-membered ring, which may also be interrupted by -O- or -NR₄₇-;

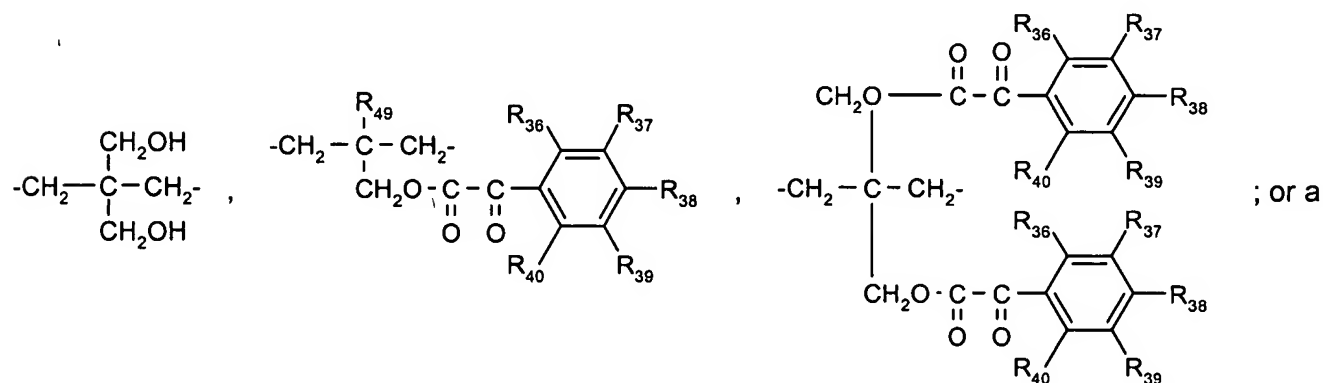
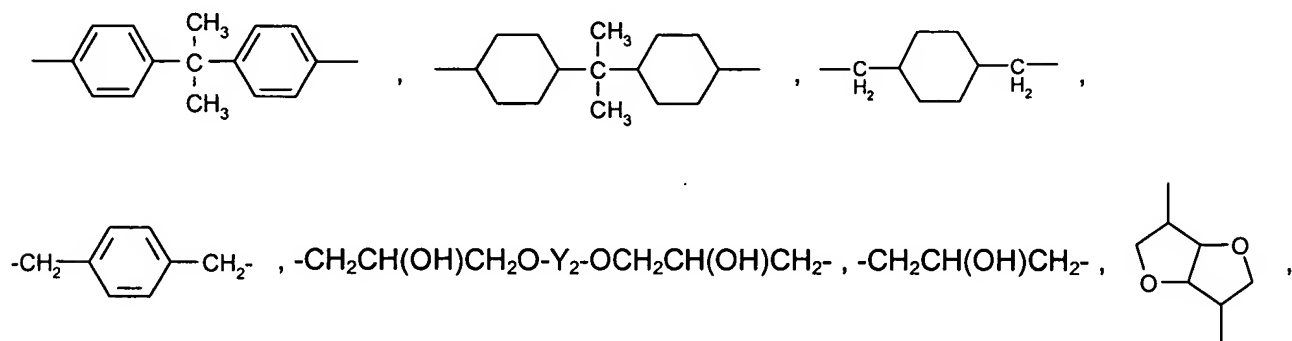
R₄₆ is C₁-C₁₂alkyl, phenyl or 4-methylphenyl;

R₄₇ is hydrogen, C₁-C₈alkyl unsubstituted or substituted by OH or by C₁-C₄alkoxy, or is phenyl unsubstituted or substituted by OH, C₁-C₄alkyl or by C₁-C₄alkoxy;



monovalent linear or branched siloxane radical;

Y₁ is C₁-C₁₂alkylene, C₄-C₈alkenylene, C₄-C₈alkynylene, cyclohexylene, C₄-C₄₀alkylene interrupted by one or more -O-, -S- or -NR₄₈-, or is phenylene or Y₁ is a group



divalent linear or branched siloxane radical;

Y₂ has the same definitions as Y₁ with the exception of the formula

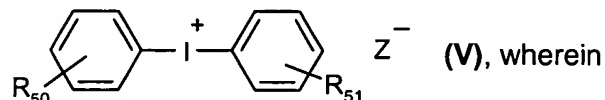
-CH₂CH(OH)CH₂O-Y₂-OCH₂CH(OH)CH₂- ;

R₄₈ is hydrogen, C₁-C₁₂alkyl or phenyl; and

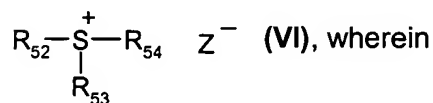
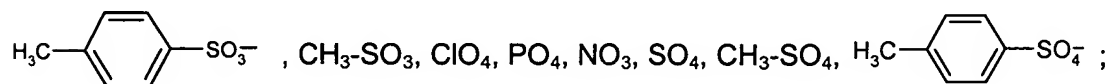
R₄₉ is hydrogen, CH₂OH or C₁-C₄alkyl.

6. **(currently amended)**: A method according to claim 5 [[4]], wherein component (d) in the composition is at least one compound selected from the group consisting of formula I ~~or~~ and II [[.]] .
~~especially a mixture of a compound of formula I and a compound of formula II.~~

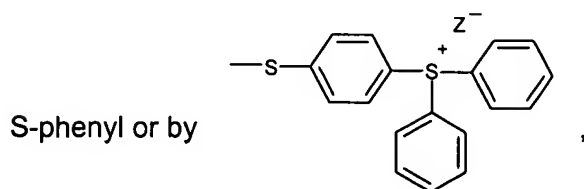
7. **(currently amended)**: A method according to ~~either~~ claim 1 ~~or claim 2~~, wherein component (d) in the composition is at least one compound selected from the group consisting of formula V, VI, VII ~~or~~ and VIIa



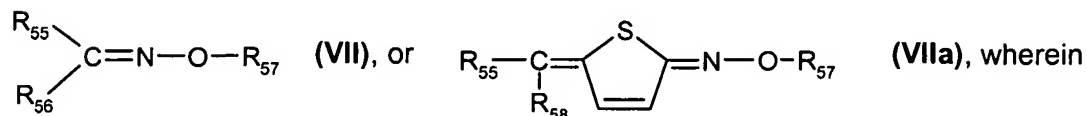
R_{50} and R_{51} are each independently of the other hydrogen, $\text{C}_1\text{-C}_{20}$ alkyl, $\text{C}_1\text{-C}_{20}$ alkoxy, OH-substituted $\text{C}_1\text{-C}_{20}$ alkoxy, halogen, $\text{C}_2\text{-C}_{12}$ alkenyl, cycloalkyl, especially methyl, isopropyl or isobutyl; and Z^- is an anion, especially PF_6^- , SbF_6^- , AsF_6^- , BF_4^- , $(\text{C}_6\text{F}_5)_4\text{B}^-$, Cl^- , Br^- , HSO_4^- , $\text{CF}_3\text{-SO}_3^-$, F-SO_3^- ,



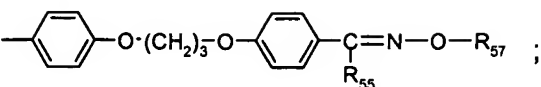
R_{52} , R_{53} and R_{54} are each independently of the others unsubstituted phenyl, or phenyl substituted by –



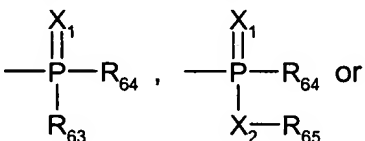
Z^- is as defined above;

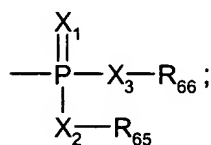


R_{55} is $\left[\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}- \\ \parallel \end{array} \right]_q R_{58}$, (CO)O-C₁-C₄alkyl, CN or C₁-C₁₂haloalkyl;

R_{56} has one of the definitions given for R_{55} or is  ;

R_{57} is C₁-C₁₈alkylsulfonyl, C₁-C₁₀haloalkylsulfonyl, camphorylsulfonyl, phenyl-C₁-C₃alkylsulfonyl, C₃-C₃₀cycloalkylsulfonyl, phenylsulfonyl, naphthylsulfonyl, anthracylsulfonyl or phenanthrylsulfonyl, ~~the groups cycloalkyl, phenyl, naphthyl, anthracyl and phenanthryl of the radicals C₃-C₃₀cycloalkylsulfonyl, phenyl-C₁-C₃alkylsulfonyl, phenylsulfonyl, naphthylsulfonyl, anthracylsulfonyl and phenanthrylsulfonyl being~~ unsubstituted or substituted by one or more halogen, C₁-C₄haloalkyl, CN, NO₂, C₁-C₁₆alkyl, phenyl, C₁-C₄alkylthio, C₁-C₄alkoxy, phenoxy, C₁-C₄alkyl-O(CO)-, C₁-C₄alkyl-(CO)O-, R₆₇OSO₂- and/or

-NR₆₀R₆₁ substituents; or R_{57} is C₂-C₆haloalkanoyl, halobenzoyl,  or



X_1 , X_2 and X_3 are each independently of the others O or S;

q is 0 or 2; and

R_{58} is C₁-C₁₂alkyl, cyclohexyl, camphoryl, unsubstituted phenyl, or phenyl substituted by one or more halogen, C₁-C₁₂alkyl, OR₅₉, SR₅₉ or NR₆₀R₆₁ substituents;

R_{59} is C₁-C₁₂alkyl, phenyl, phenyl-C₁-C₄alkyl or C₁-C₁₂hydroxyalkyl;

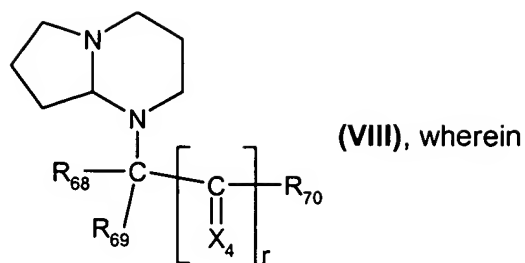
R_{60} and R_{61} are each independently of the other hydrogen, C₁-C₄alkyl, C₂-C₆hydroxyalkyl, or R_{60} and R_{61} , together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O atoms or an NR₆₂ group;

R_{62} is hydrogen, phenyl, phenyl-C₁-C₄alkyl, C₁-C₁₂alkyl or C₂-C₅hydroxyalkyl;

R_{63} , R_{64} , R_{65} and R_{66} are each independently of the others C₁-C₆alkyl, C₁-C₆haloalkyl; or phenyl unsubstituted or substituted by C₁-C₄alkyl or by halogen; and

R_{67} is hydrogen, C₁-C₄alkyl, phenyl or tolyl.

8. (currently amended): A method according to either claim 1 or claim 2, wherein component (d) in the composition is at least one compound selected from the group consisting of formula VIII



r is 0 or 1;

X₄ is CH₂ or O;

R₆₈ and **R₆₉** are each independently of the other hydrogen or C₁-C₂₀alkyl; and

R₇₀ is unsubstituted or C₁-C₁₂alkyl- or C₁-C₁₂alkoxy-substituted phenyl, naphthyl or biphenyl.

9. **(currently amended)**: A method according to ~~either claim 1 or claim 2~~, wherein the composition comprises, in addition to the photolabile component (d), other additives (h), sensitizer compounds (f) or/and dyes or pigments (g).

10. **(original)**: A method according to claim 1, wherein the composition comprises at least one light stabilizer or/and at least one UV absorber compound.

11. **(currently amended)**: A method according to ~~either claim 1 or claim 2~~, wherein the composition is a surface coating.

12. **(currently amended)**: A method according to ~~either claim 1 or claim 2~~, wherein the composition is a printing ink.

13. **(currently amended)**: A method according to ~~either claim 1 or claim 2~~, wherein the composition comprises as polymerizable component solely free-radical-polymerizable compounds (a).

14. **(currently amended)**: A method according to claim 13, wherein the free-radical-polymerizable compound comprises at least one compound selected from the group consisting of mono-, di-, tri- or tetra-functional acrylate monomers and/or at least one mono-, di-, tri- or tetra-functional acrylate-functional oligomers.

15. **(currently amended)**: A method according to ~~either claim 1 or claim 2~~, wherein the composition comprises as polymerisable component solely cationically polymerisable or crosslinkable compounds (b).

16. **(currently amended)**: A method according to ~~either claim 1 or claim 2~~, wherein the composition comprises as polymerisable component a mixture of at least one free-radical-polymerisable compound (a) and at least one cationically polymerisable compound (b).

17. **(currently amended)**: A coated substrate which is coated on at least one surface by means of the method according to ~~either claim 1 or claim 2~~.

18. **(currently amended)**: A coating obtainable by a method according to ~~either claim 1 or claim 2~~.

19. **(currently amended)**: A method of curing a composition comprising

(1) a combination of at least one electron acceptor compound, ~~especially a maleimide compound~~, and at least one electron donor compound, ~~especially a vinyl ether compound~~; and

(2) optionally at least one free-radical-polymerisable compound (a),
wherein the curing is carried out in a plasma discharge chamber.

20. **(currently amended)**: A method of curing a composition comprising

(a) at least one free-radical-polymerisable component having at least one ethylenically unsaturated double bond, the free-radical-polymerisable component optionally additionally being functionalised with OH, NH₂, COOH, epoxy or NCO groups; and

(a1) a mixture of at least one compound selected from the group consisting of polyacrylates or polyester polyols,

and at least one compound selected from the group consisting of ~~in combination with melamine, or with a melamine derivatives, or in combination with a~~ and blocked or non-blocked polyisocyanates;

or

(a2) a mixture of at least one compound selected from the group consisting of carboxyl-, anhydride- or amino-functional polyesters or ~~and at least one carboxyl-, anhydride- or amino-functional polyacrylates~~,

and at least one compound selected from the group consisting of ~~in combination with an epoxy-functional polyesters or~~ and polyacrylates;

or

(a3) a mixture of (a1) and (a2); and

(d) at least one photolabile compound that is activatable by plasma discharge;

wherein

the curing of the composition is carried out in a plasma discharge chamber and, optionally, thermal pre- or after-treatment is carried out.

21. **(original)**: A method of producing mouldings from composite materials, wherein a support is impregnated with a composition comprising

(a) at least one free-radical-polymerisable compound or

(b) at least one compound that, under the action of an acid, is able to enter into a polymerisation, polycondensation or polyaddition reaction, or

(c) at least one compound that, under the action of a base, is able to enter into a polymerisation, polycondensation or polyaddition reaction, or

a mixture of components (a) and (b), or

a mixture of components (a) and (c); and

(d) at least one photolabile compound that is activatable by plasma discharge;

and is introduced into a mould;

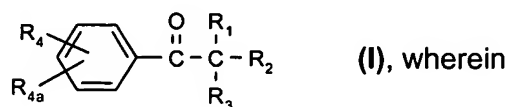
wherein the curing is carried out in a plasma discharge chamber and, optionally, thermal aftertreatment is carried out.

22. **(new)**: A method according to claim 2, wherein component (d) in the composition is selected from the group consisting of a free-radical photoinitiator, a photolabile acid or a photolabile base.

23. **(new)**: A method according to claim 2, wherein component (d) in the composition is at least one compound selected from the group consisting of benzophenones, benzophenone derivatives, acetophenone, acetophenone derivatives, halomethylbenzophenones, halomethylarylsulfones, dialkoxyacetophenones, anthracene, anthracene derivatives, thioxanthone, thioxanthone derivatives, 3-ketocoumarin, 3-ketocoumarin derivatives, anthraquinone, anthraquinone derivatives, α -hydroxy- or α -amino-acetophenone derivatives, α -sulfonylacetophenone derivatives, 4-aryloxy-1,3-dioxolanes, benzoin alkyl ethers and benzilketals, phenyl glyoxalates and derivatives thereof, dimeric phenyl glyoxalates, peresters, monoacylphosphine oxides, bisacylphosphine oxides, trisacylphosphine oxides, halomethyltriazines, titanocenes, borate compounds, O-acyloxime compounds,

camphorquinone derivatives, iodonium salts, sulfonium salts, iron aryl complexes, oximesulfonic acid esters and photolabile amines.

24. (new): A method according to claim 2, wherein component (d) in the composition is at least one compound selected from the group consisting of formula I, II, III or/and IV



R_1 is $\text{C}_1\text{-C}_{12}$ alkyl or $\text{C}_1\text{-C}_{12}$ alkoxy;

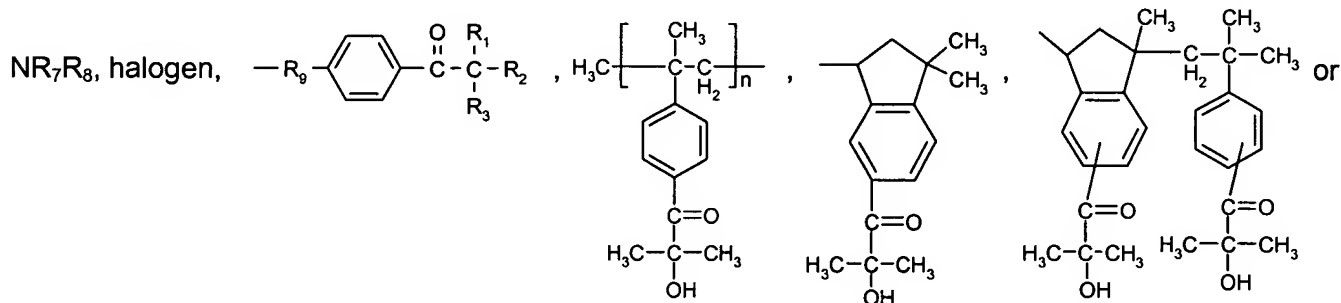
R_2 is phenyl, OR_5 or NR_7R_8 ;

R_3 has one of the definitions given for R_1 or is $\text{C}_3\text{-C}_{12}$ alkenyl, phenyl- $\text{C}_1\text{-C}_6$ alkyl or $\text{C}_1\text{-C}_6$ alkyl-phenyl- $\text{C}_1\text{-C}_6$ alkyl;

or R_1 and R_3 , together with the carbon atom to which they are bonded, form a cyclohexyl ring;

R_2 being phenyl when R_1 and R_3 are both alkoxy;

R_4 and R_{4a} are each independently of the other hydrogen, $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_1\text{-C}_{12}$ hydroxyalkyl, OR_5 , SR_6 ,

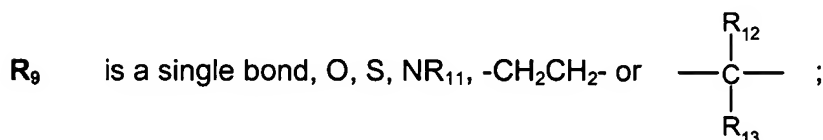


a monovalent linear or branched siloxane radical;

n is a number from 1 to 10;

R_5 and R_6 are each independently of the other hydrogen, $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_1\text{-C}_{12}$ alkenyl, phenyl, benzyl, $\text{Si}(\text{CH}_3)_3$ or $-\text{[C}_a\text{H}_{2a}\text{X}]_b-\text{R}_{10}$;

R_7 and R_8 are each independently of the other hydrogen, $\text{C}_1\text{-C}_{12}$ alkyl or $\text{C}_2\text{-C}_5$ hydroxyalkyl, or R_7 and R_8 , together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O atoms or a NR_{11} group;



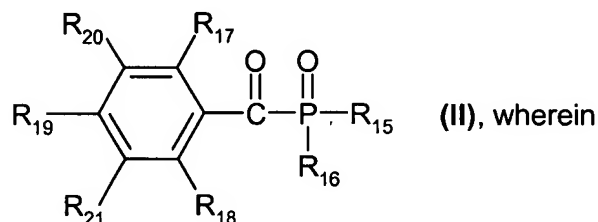
a and b are each independently of the other a number from 1 to 12;

X is S, O or NR₁₁;

R₁₀ is hydrogen, C₁-C₁₂alkyl or $\text{---}\overset{\text{O}}{\parallel}\text{C}\text{---}\overset{\text{R}_{12}}{\text{C}}=\overset{\text{R}_{13}}{\text{C}}\text{---R}_{14}$;

R₁₁ is hydrogen, phenyl, phenyl-C₁-C₄alkyl, C₁-C₁₂alkyl or C₂-C₅hydroxyalkyl; and

R₁₂, R₁₃ and R₁₄ are each independently of the others hydrogen or methyl;



R₁₅ and R₁₆ are each independently of the other C₁-C₁₂alkyl, C₁-C₁₂alkoxy; phenyl which is unsubstituted or substituted by one or more OR₂₂, SR₂₃, NR₂₄R₂₅, C₁-C₁₂alkyl or halogen substituents;

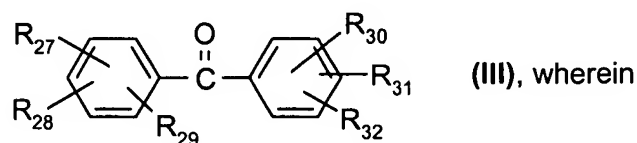
or **R₁₅ and R₁₆** are biphenyl, naphthyl, phenyl-C₁-C₄alkyl or $\text{---}\overset{\text{O}}{\parallel}\text{C}\text{---}$;

R₁₇ and R₁₈ are each independently of the other C₁-C₁₂alkyl, C₁-C₁₂alkoxy, CF₃ or halogen;

R₁₉, R₂₀ and R₂₁ are each independently of the others hydrogen, C₁-C₁₂alkyl, C₁-C₁₂alkoxy, CF₃ or halogen;

R₂₂, R₂₃, R₂₄ and R₂₅ are each independently of the others hydrogen, C₁-C₁₂alkyl, C₂-C₁₂alkenyl, C₃-C₈cycloalkyl, phenyl, benzyl, or C₂-C₂₀alkyl which is interrupted by O atoms and is unsubstituted or substituted by OH or/and SH; or **R₂₄ and R₂₅**, together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O or S atoms or an NR₂₆ group; and

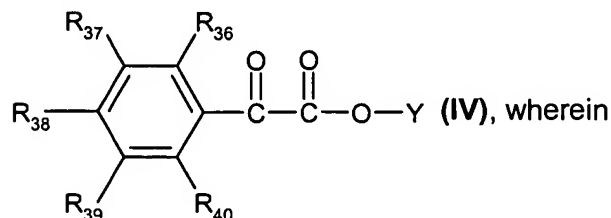
R₂₆ is hydrogen, phenyl, phenyl-C₁-C₄alkyl, C₁-C₁₂alkoxy, C₁-C₁₂alkyl or C₁-C₁₂hydroxyalkyl;



R₂₇, R₂₈, R₂₉, R₃₀, R₃₁ and R₃₂ are each independently of the others hydrogen, C₁-C₄alkyl, phenyl, naphthyl, -OR₃₅, -SR₃₅, -(CO)O(C₁-C₄alkyl), halogen, NR₃₃R₃₄ or a monovalent linear or branched siloxane radical, or **R₂₉ and R₃₀**, each in the o-position to the carbonyl group, together form a S atom; and

R₃₃ and **R₃₄** are each independently of the other hydrogen, C₁-C₄alkyl, C₂-C₆hydroxyalkyl, or **R₃₃** and **R₃₄**, together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O atoms or a NR₁₁ group; and

R₃₅ is C₁-C₁₂alkyl, C₂-C₆hydroxyalkyl or phenyl;



R₃₆, **R₃₇**, **R₃₈**, **R₃₉** and **R₄₀** are each independently of the others hydrogen, C₁-C₁₂alkyl unsubstituted or substituted by OH, C₁-C₄alkoxy, phenyl, naphthyl, halogen, CN and/or by -OCOR₄₁, or C₂-C₁₂alkyl which is interrupted by one or more O atoms, or **R₃₆**, **R₃₇**, **R₃₈**, **R₃₉** and **R₄₀** are OR₄₂, SR₄₃, NR₄₄R₄₅, halogen, a monovalent linear or branched siloxane radical, or phenyl unsubstituted or substituted by one or two C₁-C₄alkyl or/and one or two C₁-C₄alkoxy substituents, it being possible for the substituents OR₄₂, SR₄₃, NR₄₄R₄₅ to form 5- or 6-membered rings by way of the radicals R₄₂, R₄₃, R₄₄ and/or R₄₅ with further substituents on the phenyl ring or with one of the carbon atoms of the phenyl ring;

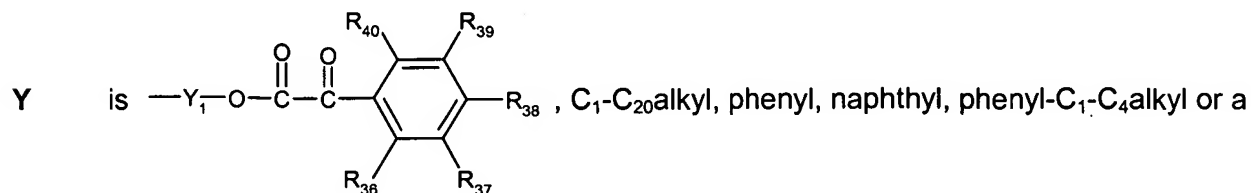
R₄₁ is C₁-C₈alkyl, or phenyl unsubstituted or substituted by from one to three C₁-C₄alkyl and/or one to three C₁-C₄alkoxy substituents;

R₄₂ and **R₄₃** are each independently of the other hydrogen, C₁-C₁₂alkyl unsubstituted or substituted by OH, C₁-C₄alkoxy, phenyl, phenoxy or/and by -OCOR₄₁, or C₂-C₁₂alkyl which is interrupted by one or more O atoms, or **R₄₂** and **R₄₃** are phenyl unsubstituted or substituted by C₁-C₄alkoxy, phenyl or/and by C₁-C₄alkyl, or **R₄₂** and **R₄₃** are C₃-C₆alkenyl, cyclopentyl, cyclohexyl or naphthyl;

R₄₄ and **R₄₅** are each independently of the other hydrogen, C₁-C₁₂alkyl unsubstituted or substituted by OH, C₁-C₄alkoxy or/and by phenyl, or C₂-C₁₂alkyl which is interrupted by one or more O atoms, or **R₄₄** and **R₄₅** are phenyl, -COR₄₁ or SO₂R₄₆, or **R₄₄** and **R₄₅**, together with the nitrogen atom to which they are bonded, form a 5-, 6- or 7-membered ring, which may also be interrupted by -O- or -NR₄₇-;

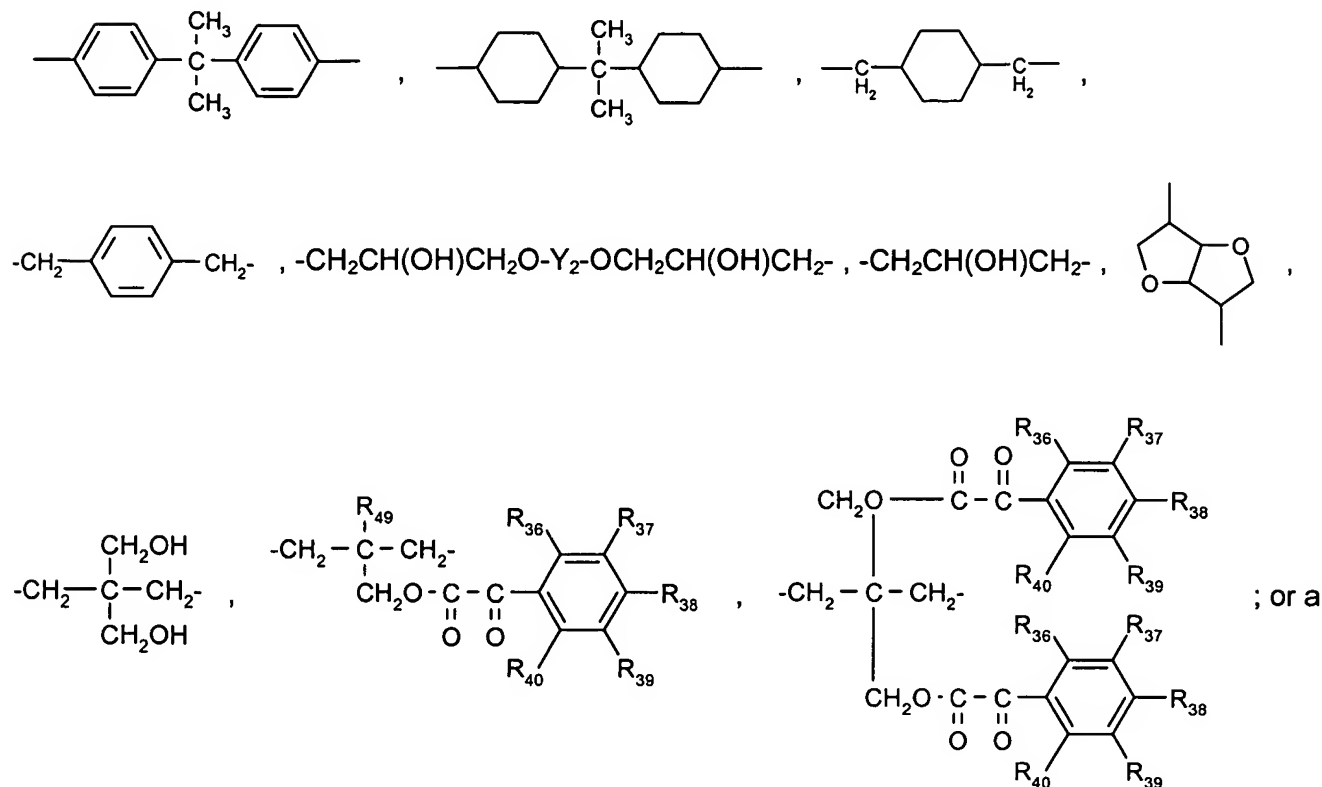
R₄₆ is C₁-C₁₂alkyl, phenyl or 4-methylphenyl;

R₄₇ is hydrogen, C₁-C₈alkyl unsubstituted or substituted by OH or by C₁-C₄alkoxy, or is phenyl unsubstituted or substituted by OH, C₁-C₄alkyl or by C₁-C₄alkoxy;



monovalent linear or branched siloxane radical;

Y_1 is C_1 - C_{12} alkylene, C_4 - C_8 alkenylene, C_4 - C_8 alkynylene, cyclohexylene, C_4 - C_{40} alkylene interrupted by one or more -O-, -S- or -NR₄₈-, or is phenylene or Y_1 is a group



divalent linear or branched siloxane radical;

Y_2 has the same definitions as Y_1 with the exception of the formula

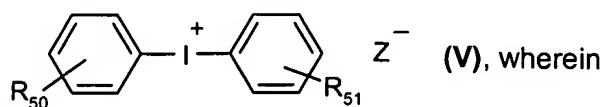
$-CH_2CH(OH)CH_2O-Y_2-OCH_2CH(OH)CH_2-$;

R_{48} is hydrogen, C_1 - C_{12} alkyl or phenyl; and

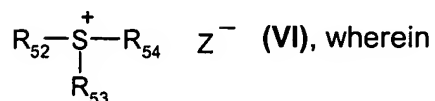
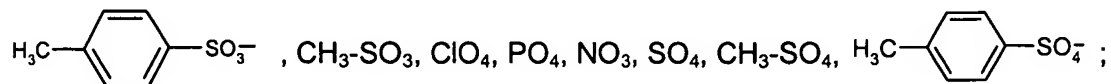
R_{49} is hydrogen, CH_2OH or C_1 - C_4 alkyl.

25. (new): A method according to claim 24, wherein component (d) in the composition is at least one compound selected from the group consisting of formula I or/and II.

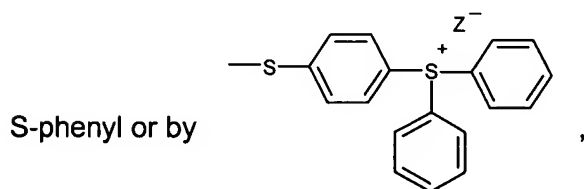
26. (new): A method according to claim 2, wherein component (d) in the composition is at least one compound selected from the group consisting of formula V, VI, VII and VIIa



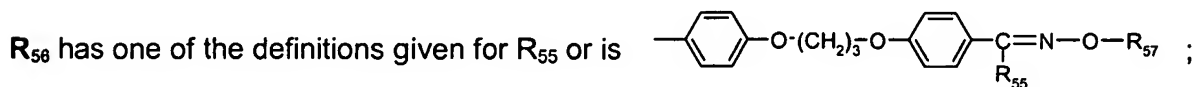
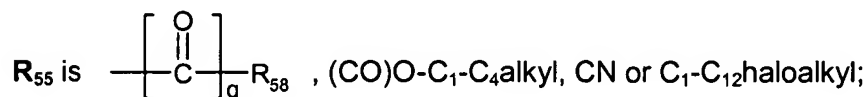
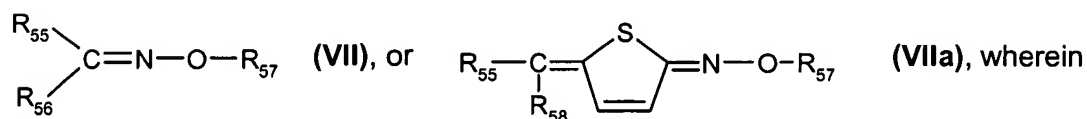
R_{50} and R_{51} are each independently of the other hydrogen, C_1 - C_{20} alkyl, C_1 - C_{20} alkoxy, OH-substituted C_1 - C_{20} alkoxy, halogen, C_2 - C_{12} alkenyl, cycloalkyl, especially methyl, isopropyl or isobutyl; and Z is an anion, especially PF_6 , SbF_6 , AsF_6 , BF_4 , $(C_6F_5)_4B$, Cl , Br , HSO_4 , CF_3-SO_3 , $F-SO_3$,



R_{52} , R_{53} and R_{54} are each independently of the others unsubstituted phenyl, or phenyl substituted by –

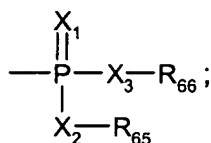


Z is as defined above;



R_{57} is C_1 - C_{16} alkylsulfonyl, C_1 - C_{10} haloalkylsulfonyl, camphorylsulfonyl, phenyl- C_1 - C_3 alkylsulfonyl, C_3 - C_{30} cycloalkylsulfonyl, phenylsulfonyl, naphthylsulfonyl, anthracylsulfonyl or phenanthrylsulfonyl, unsubstituted or substituted by one or more halogen, C_1 - C_4 haloalkyl, CN , NO_2 , C_1 - C_{16} alkyl, phenyl, C_1 - C_4 alkylthio, C_1 - C_4 alkoxy, phenoxy, C_1 - C_4 alkyl- $O(CO)-$, C_1 - C_4 alkyl- $(CO)O-$, $R_{67}OSO_2-$ and/or

-NR₆₀R₆₁ substituents; or R₅₇ is C₂-C₆haloalkanoyl, halobenzoyl, $\begin{array}{c} \text{X}_1 \\ \parallel \\ \text{---P---R}_{64} \\ | \\ \text{R}_{63} \end{array}$, $\begin{array}{c} \text{X}_1 \\ \parallel \\ \text{---P---R}_{64} \\ | \\ \text{X}_2\text{---R}_{65} \end{array}$ or



X₁, X₂ and X₃ are each independently of the others O or S;

q is 0 or 2; and

R₅₈ is C₁-C₁₂alkyl, cyclohexyl, camphoryl, unsubstituted phenyl, or phenyl substituted by one or more halogen, C₁-C₁₂alkyl, OR₅₉, SR₅₉ or NR₆₀R₆₁ substituents;

R₅₉ is C₁-C₁₂alkyl, phenyl, phenyl-C₁-C₄alkyl or C₁-C₁₂hydroxyalkyl;

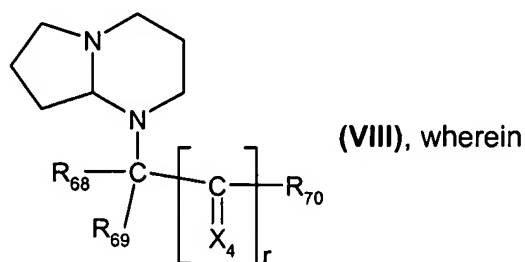
R₆₀ and R₆₁ are each independently of the other hydrogen, C₁-C₄alkyl, C₂-C₆hydroxyalkyl, or R₆₀ and R₆₁, together with the N atom to which they are bonded, form a 5- or 6-membered ring, which may also contain O atoms or an NR₆₂ group;

R₆₂ is hydrogen, phenyl, phenyl-C₁-C₄alkyl, C₁-C₁₂alkyl or C₂-C₅hydroxyalkyl;

R₆₃, R₆₄, R₆₅ and R₆₆ are each independently of the others C₁-C₆alkyl, C₁-C₆haloalkyl; or phenyl unsubstituted or substituted by C₁-C₄alkyl or by halogen; and

R₆₇ is hydrogen, C₁-C₄alkyl, phenyl or tolyl.

27. (new): A method according to claim 2, wherein component (d) in the composition is at least one compound selected from the group consisting of of formula VIII



r is 0 or 1;

X₄ is CH₂ or O;

R₆₈ and R₆₉ are each independently of the other hydrogen or C₁-C₂₀alkyl; and

R₇₀ is unsubstituted or C₁-C₁₂alkyl- or C₁-C₁₂alkoxy-substituted phenyl, naphthyl or biphenyl.

28. **(new)**: A method according to claim 2, wherein the composition comprises, in addition to the photolabile component (d), other additives (h), sensitizer compounds (f) or/and dyes or pigments (g).
29. **(new)**: A method according to claim 2, wherein the composition is a surface coating.
30. **(new)**: A method according to claim 2, wherein the composition is a printing ink.
31. **(new)**: A method according to either claim 2, wherein the composition comprises as polymerizable component solely free-radical-polymerizable compounds (a).
32. **(new)**: A method according to claim 31, wherein the free-radical-polymerizable compound comprises at least one compound selected from the group consisting of mono-, di-, tri- or tetra-functional acrylates monomer and mono-, di-, tri- or tetra-functional acrylate-functional oligomers.
33. **(new)**: A method according to claim 2, wherein the composition comprises as polymerizable component solely cationically polymerizable or crosslinkable compounds (b).
34. **(new)**: A method according to claim 2, wherein the composition comprises as polymerizable component a mixture of at least one free-radical-polymerizable compound (a) and at least one cationically polymerizable compound (b).
35. **(new)**: A coated substrate which is coated on at least one surface by means of the method according to claim 2.
36. **(new)**: A coating obtainable by a method according to claim 2.
37. **(new)**: A method of curing a composition comprising
- (1) a combination of at least one electron acceptor maleimide compound, and at least one electron donor vinyl ether compound; and
 - (2) optionally at least one free-radical-polymerizable compound (a),
- wherein the curing is carried out in a plasma discharge chamber.